

IN THE CLAIMS:

Please Cancel claims 1-36, without prejudice, and add new claims 37-71 as follows.

Claims 1-36 (Cancelled)

37. (New) An analog navigation device, comprising:

a transmitter configured to generate a light signal;

a receiver configured to receive the light signal;

a light guide having a surface for internally reflecting the light signal from the transmitter to the receiver; and

an actuator having an actuator surface, said actuator surface having at least a portion which is movable between a first position spaced apart from a portion of said light guide surface, with a gas or fluid therebetween, and a second position which is in contact with the portion of the light guide surface,

wherein the portion of the light guide surface has a higher refractive index than the portion of the actuator surface, and wherein the portion of the actuator surface has a different refractive index than the gas or fluid, and wherein in use the relative refractive index is changed at a contacted portion of the light guide surface, thereby altering the light signal received by the receiver.

38. (New) An analog navigation device as recited in claim 37, wherein the receiver is configured to output a signal indicative of the position of the contacted portion of the light guide surface.

39. (New) An analog navigation device according to claim 37, wherein the receiver is configured to use the received signal to control a position of an element.

40. (New) An analog navigation device according to claim 37, wherein the second position is at a selected one of a plurality of portions on the surface of the light guide.

41. (New) An analog navigation device according to claim 37, wherein a plurality of transmitters is provided.

42. (New) An analog navigation device according to claim 41, wherein the transmitters are arranged to pulse alternatively.

43. (New) An analog navigation device according to claim 37, wherein a plurality of receivers is provided.

44. (New) An analog navigation device according to claim 37, wherein the transmitter comprises an LED.

45. (New) An analog navigation device according to claim 37, wherein the receiver comprises a photodiode.

46. (New) An analog navigation device according to claim 37, wherein four transmitters and a single receiver are provided in a cross configuration having four corners and a center, each one of the transmitters being disposed at one of the corners and the receiver being disposed at the center.

47. (New) An analog navigation device according to claim 37, wherein the light guide includes an optical grating.

48. (New) An analog navigation device according to claim 37, wherein said surface of said actuator comprises a hemispherical surface.

49. (New) An analog navigation device according to claim 37, wherein said surface of said actuator is supported by one or more side walls.

50. (New) An analog navigation device according to claim 49, wherein said one or more side walls are deformable.

51. (New) An analog navigation device according to claim 37, wherein said surface of said actuator is deformable.

52. (New) An analog navigation device according to claim 37, wherein said actuator has an upper portion in the form of a stick for actuation by a user.

53. (New) An analog navigation device according to claim 37, wherein said actuator comprises an arcuate disk disposed on said surface of said actuator.

54. (New) An analog navigation device according to claim 37, wherein the transmitter and the receiver are disposed in a layer on an opposite side of said light guide to said actuator.

55. (New) An analog navigation device according to claim 37, further comprising a processing device for processing the or each signal received by the or each receiver and outputting a control signal to control the position of the element.

56. (New) An analog navigation device according to claim 37, further comprising a display for displaying an element, whereby in use the position of the element on the display is controlled.

57. (New) An analogue navigation device according to claim 37, wherein said received signal is used to produce a radio signal for controlling a radio controlled device.

58. (New) An analog navigation device according to claim 37, wherein the actuator surface is exposed at the exterior of the device.

59. (New) A hand held electronic device according to claim 37, wherein the actuator surface is manually actuable by a user of the device.

60. (New) A hand held electronic device, comprising:

- a transmitter configured to generate a light signal;
- a receiver configured to receive the light signal;
- a light guide having a surface for internally reflecting the light signal from the transmitter to the receiver; and
- an actuator having an actuator surface, said actuator surface having at least a portion which is movable between a first position spaced apart from a portion of said light guide surface, with a gas or fluid therebetween, and a second position which is in contact with the portion of the light guide surface,

wherein the portion of the light guide surface has a higher refractive index than the portion of the actuator surface, and wherein the portion of the actuator surface has a different refractive index than the gas or fluid, and wherein in use the relative refractive index is changed at a contacted portion of the light guide surface, thereby altering the light signal received by the receiver.

61. (New) A hand held electronic device as claimed in claim 60, wherein the actuator surface is exposed at the exterior of the device.

62. (New) A hand held electronic device as claimed in claim 61, wherein the actuator surface is manually actuable by a user of the device.

63. (New) A hand held electronic device as claimed in claim 61, wherein the actuator surface is actuable by a user via a key of the device.

64. (New) A hand held electronic device as claimed in claim 63, wherein the key comprises part of a keypad.

65. (New) A method of navigating, said method comprising:
generating a light signal; and
reflecting the light signal off a surface,
wherein a relative refractive index between materials on either side of the surface is changed, thereby altering the reflected light signal, the reflected light signal being received and used to control a position of an element.

66. (New) A key device, comprising:
a transmitter configured to generate a light signal;
a receiver configured to receive the light signal;
a light guide having a surface for internally reflecting the light signal from the transmitter to the receiver; and

an actuator having an actuator surface, said actuator surface having at least a portion which is movable between a first position spaced apart from a portion of said light guide surface, with a gas or fluid therebetween, and a second position which is in contact with the portion of the light guide surface,

wherein the portion of the light guide surface has a higher refractive index than the portion of the actuator surface, and wherein the portion of the actuator surface has a different refractive index than the gas or fluid, and wherein in use the relative refractive index is changed at a contacted portion of the light guide surface, thereby altering the light signal received by the receiver.

67. (New) A key device according to claim 66, whereby said receiver is configured to output a signal indicative of the position of the contacted portion of the light guide surface.

68. (New) A key device according to claim 66, wherein said actuator comprises a key or button.

69. (New) A key device according to claim 66, wherein said device further comprises a key which moves said actuator in use.

70. (New) A key device according to claim 68, wherein said device comprises a plurality of keys.

71. (New) An apparatus, comprising:

transmitter means for transmitting a light signal;

receiver means for receiving the light signal;

light guiding means for guiding light, said light guiding means having a surface for internally reflecting the light signal from the transmitter means to the receiver means;

and

actuator means for actuating, said actuator means having a surface with at least a portion of which is movable between a first position spaced apart from a portion of the light guide surface, with a gas or fluid therebetween, and a second position in contact with the portion of the light guide surface, the portion of the light guide surface having a higher refractive index than the portion of the actuator surface, and the portion of the actuator surface having a different refractive index than the gas or fluid,

wherein in use the relative refractive index is changed at the contacted portion of the light guide surface, thereby altering the light signal received by the receiver means.